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Dave H.

REPORT BY PANEL OF CONSULTANTS ON ORR PROGRAM

13 December 1952

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COMMENTS ON ORR PROGRAM BY PANEL OF CONSULTANTS

Introduction

The Panel has been supplied with a proposed program for 1953 and has been asked for general and specific comments and suggestions.

The program is for basic research to supply fundamental information for use when specific reports are asked for. The program has been allotted to four divisions and various branches in these divisions with specific allotment of time and definitions of subject matter to be covered.

The program has obviously been condensed from the broader list of subjects which were being considered a year and one-half ago and the Panel understands that the subjects now listed for attention have been chosen because of their apparent fundamental usefulness as judged by the administrative personnel in ORR and also based upon requests for reports which indicate the need for these subjects.

The Panel members have considered this program as a whole and each member has written his general conclusions and also detailed comment which are attached.

Overall Conclusions

The total available manpower for these studies amounts to 224,225 man-hours from now until the end of 1953. These man-hours have been distributed as follows:

for the Materials Division	- 42.6 per cent
for the Industrial Division	- 29.6 per cent
for the Services Division	- 21.7 per cent
for the Analysis Division	- 6.1 per cent

The Panel members have no information on which to question this allocation as between divisions and therefore assumes that it is apparently correct subject only to any changes which might be justified by ORR consideration of the detailed comments attached hereto. The ability of ORR to produce adequate information as called for by this program will depend on its own resources which seem to be reasonably adequate and also upon receipt of information from other government agencies, including its own, which have the duty of collecting both material and language information at the sources. The Panel wishes to again emphasize the importance of information to be obtained through covert means and from the Techniques & Methods Division which is compiling information based on inspection of captured and imported equipment.

The Panel again emphasizes the need for a more direct contact between individuals in ORR and industry to obtain basic information and factors from industrial specialists to enable the research personnel in ORR to evaluate the sketchy and frequently inadequate information usually available on many subjects. This could be arranged by more frequent contact between CIA employees and selected industrial personnel and also probably by a greater use of industrial personnel through scheduled visits to CIA in its Washington headquarters.

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The general portions of the attached individual contributions are summarized as follows:

We assume that the entire ORR program is based on the assumption that time and manpower are available to do this research. This presumably assumes that there are other adequate means for independently handling the emergency and spot requirements. If these conditions are changed by unexpected events, then, of course, the program would be altered and the personnel used on the more pressing work.

The program as a whole is satisfactory except as it may require modification if certain suggested priorities are to be put into effect.

It is eminently desirable to establish a time program as has been done in order to obtain reasonable efficiency of end production, i.e. reports.

Inspection of reports heretofore made indicate in many instances that the available information is very thin. It is highly desirable to get more meat into the hopper and it seems to the Panel that the two best means are further availability and perhaps expansion of information obtained by clandestine methods and secondly and probably of equal importance better use and probable expansion of the Sovmat program.

The suggestions recommended for greater priorities are:

1. Petroleum - jet fuel
2. Electronic Equipment
3. AEC material (if not already covered by other divisions)
4. Food

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GENERAL COMMENTS

The proposed program is a departure from previous programs. The policy of ORR has been to study and accumulate information and present requested reports to other government agencies in the intelligence field. This has resulted in a hodge-podge of production of reports with considerable repetition of efforts. The proposed new schedule sets forth a definite program of subjects to be covered. Apparently, it has been well thought out, taking into consideration the needs with the data and the manpower available. The results will be that a great increase of production of basic data will be forthcoming. This is done by the transferring of manpower to a definite schedule instead of preparing the previous hodge-podge of reports.

The basic conception of increasing production and providing the basic information is sound. The operational difficulties will be difficult and the cooperation of other departments of the government will be necessary in order to continue the present requests for information.

The general allocation and coverage of division between the various sections seems to be quite adequate. We believe this should be reviewed frequently as to priority in the light of future events and requirements. More specific suggestions as to the different terms is included in the appendixes.

In some cases research could be handled outside the department. This applies particularly to historical research which can be handled in universities or like institutions, thus saving the time of the analyst.

More emphasis can be put on office-wide reports as these bring about coordination and cross check of a particular industry and its relation to the overall economy.

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GENERAL COMMENTS

The proposed program of the Petroleum Branch of the Materials Division has been developed by the ORR staff in consultation with the Industry Petroleum Advisory Panel. As such it appears to be quite comprehensive and reasonably complete. In addition, the proposed man-hours breakdown among the projects seems to be in line with their complexity and importance. In the appendix, certain combinations of projects are proposed in the interest of increasing the report values and avoiding some overlapping. Further, it is recommended that a new project specifically on Jet Fuel be considered in view of the rapidly increasing importance of this subject.

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GENERAL COMMENTS

The preparation of projects is encyclopedic and certainly covers most areas of interest. Certain projects, however, such as 36.6 - "The Sov Bloc Production of Special Electronic Devices" - is a type of catchall which may or may not include important devices not included elsewhere. I suggest that in these cases the major included terms be listed.

In the Electrical Equipment Section it appears that far too little emphasis has been placed on electron tubes and electronic components, and relatively too much on specific types of end equipment. The quality of and productive capacity for electron tubes and electronic components are the true parameters determining a country's potentials in the electronic field; and since their manufacture requires substantial fabricating equipment, they present attractive targets whose elimination would knock out the production of all electronic gear.

In conclusion and for these reasons, electron tubes and electronic components should be high on the priority list and should get continuing attention.

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GENERAL COMMENTS

The scope of investigations proposed for the Food and Agriculture Branch is considered to be adequate for the objective in mind. Allocation of time proposed for the twenty-four projects supports the conclusion that this research program as a whole is reasonably well balanced even though 16 per cent of the total research time is scheduled for establishing a pre-war historical base of acreage and production. This does not appear unreasonable. Such information is of fundamental importance to analysis of the agricultural economy which operates within limits set by biological considerations and thus cannot over relatively short periods of time swing through the extreme limits of output observed in industrial production.

Particularly pertinent to the question of food production capabilities is information on certain production requisites, notably fertilizer, tractors, farm machinery, fuel and miscellaneous agricultural chemicals. Responsibility for assembling information on these subjects rests with other branches. It is not immediately evident from examination of the entire ORR program that adequate information on these production requisites is to be forthcoming. If indeed this gap does exist, appropriate adjustment in the ORR program should be made.

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GENERAL COMMENTS

I must start my comments with a promise. The promise is that the comprehensive program outlined is an effort to develop basic data about the general economy of the USSR which either is not in the hands of the CIA today or which is not in readily usable form. In my judgment, this is a very sizeable job, and I am far from sure that it can be completed in the time allotted.

I do not argue with the necessity for this background information. I am satisfied that it is vital to an intelligent comprehension of the USSR. It is a job which should have been done many years ago and which should then have been kept up to date. But I am not here to cry over spilled milk.

One matter does disturb me, however. None of us can know for sure what the time table of the USSR may be. Perhaps there will be plenty of time for CIA to develop this basic data about the general economy of the USSR and then with this as a background to go on to much more highly specialized problems. If so, I am sure the answers to the highly specialized problems would be sounder and more nearly complete. But can we afford to assume there is plenty of time?

This leads me to wonder whether the CIA already has a satisfactory amount of data in a smaller number of areas which might be considered "critical" from either a defensive or offensive point of view, or both. If the answer to this question is "Yes," then I endorse the program as outlined with scarcely any qualifications. But if the answer is "No," then I believe work in the latter more specialized field should take precedence over the comprehensive program outlined.

During World War II each of us had his own particular experience in industry with those items of raw materials, machine tools, or supplies which were in tightest supply. It should not be difficult to assemble such a list from the experiences of representatives of a number of different companies which manufactured war material or from the experiences of the members of the War Production Board. Perhaps this list of limitations could be modified to reflect those items which would pinch the USSR. From this a program for action could be developed in a comparatively short space of time, part of which could then be put into effect immediately and the balance kept in readiness for the time when we might get into a shooting war. I have no way of knowing if there is such a program in readiness at the present time.

I raise these questions through ignorance. If the CIA is satisfied that it has enough information in these specialized, critical areas, then the program outlined sounds like a very appropriate next step. If not, I would favor work in the narrow field first.

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GENERAL COMMENTS

I shall confine my remarks to a general opinion on the approach taken to the problem of pointing economic research to the most useful purpose.

I am much impressed by the broad base of opinion used or consulted in formulating the overall future program. It appears that:

1. Considerable self-criticism of past studies has been undergone.
2. The ideas of all specialists were solicited and apparently intelligently weighed in their influence on the overall plan.
3. A program of studies has been indexed which has undoubtedly invited the criticism of the various intelligence, military, strategic, and analytical agencies.
4. In the absence of derogatory comment from the above of the overall plan, I assume the projected program has met approval from both ends - i.e. (a) from the specialists that can see the trees, and (b) from the broad planners that can see the forest.

Assuming that my assumption in No. 4 above is correct, I believe that the wide area of agreement of different types of thinking is not only a great credit to those that worked it out, but a strong recommendation for the program.

To the ever present question - how do you know you can come near accomplishing what you have set out to do? - it seems to me this most difficult question has been intelligently approached by time study and time planning techniques.

The working party report gives recognition to the need of "building blocks" and points clearly to the ways and means of their use.

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GENERAL COMMENTS

The ORR Research Program for the calendar year 1953 appears to cover the essential phases of the Economy of the Soviet Bloc necessary for analysis of Soviet intentions. It is assumed, that the necessary degree of priority has been placed on certain projects, consistent with the work in terms of time involved in completing the project by designating the quarter of 1953 in which completion is due. ORR is to be complimented in the formation of the program in view of the tremendous scope of the work involved.

The problems of Economic Intelligence are ably defined in "First Annual Progress Report of the EIC (July 51 - June 52)." One of these problems, namely the elimination of critical deficiencies on the major intelligence aspects of each important field, should be minimized as a result of the 1953 program. However, it is essential that two other conditions mentioned in the Progress Report be achieved for maximum effectiveness. First, better coordination among the various intelligence agencies is essential and second, the requirement of professional competence in members of sub-committees should be fulfilled.

While recognizing the necessity that "member agencies must exert greater efforts to meet their assignment deadlines" in order that a maximum number of projects be completed, it is assumed that some flexibility will be allowed to accommodate current intelligence information when of importance to a particular project. A "flying squad" might well be formed to help out as tight spots arise.

It is suggested that to decrease the time and effort of individual analyst's time full use be made of outside consultants and industry, consistent with security measures.

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GENERAL COMMENTS

1. The following seemed to me to be encouraging features of this comprehensive and well-rounded study:

a. The emphasis which it places on production of reports

There is a strong tendency for a group such as ORR to devote itself to self-education, to publish nothing, and to throw on policy makers and other customers full responsibility for asking questions. I am well aware that the worth of research cannot be measured in number of reports, pages, or words, but it is essential both for policy makers and for other intelligence agencies to know more about the Russian economy and about ORR capabilities.

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c. The expanded program of economic analysis as evidenced by the research projects of the Analysis Division. The Analysis Division is small and in my opinion should remain small. This is one research area where it is impossible to substitute quantity for quality.

d. The emphasis which is placed on certain research areas which have been sadly neglected in the past and which seem to me to deserve the highest priority. I have in mind particularly the stockpiling project and the projects on the Chinese economy.

2. There still seems to me to be too little on problems of basic method--including self-criticism and the evaluation of past estimates.

ORR is largely sheltered from searching external criticism by security barriers. It must, therefore, develop methods of internal criticism (including the appropriate use of consultants) if it is to learn from mistakes and improve its methods.

In this connection, I like the suggestion of the Working Group on Techniques and Projects for a series of Occasional Papers which would be "think pieces" on method.

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When really firm data become available

are they used in a systematic or controlled way to check prior estimates and the factors or methods used in making them? Will the wealth of firm detail on eastern Germany be analyzed from this point of view: How much does this detail add to our fund of necessary knowledge? Could we have answered the important questions without it? What is the intelligence worth of similar detail on the Soviet Union? (We have a vast encyclopedia of industrial information on the US which we lack analytical ability to utilize in estimating our own mobilization potential.)

3. I think it is right that the allocation effort to office-wide projects should be relatively small, but such projects, directed as they are to answering questions closely related to national security policy, can provide as time goes on extremely valuable guidance to the content and balance of our work as

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GENERAL COMMENT

a whole. Mr. Amory's reference to the administrative difficulties of office-wide projects makes me wonder whether the best techniques have been discovered for organizing them. A technique which might be tried, which has worked well in my own organization, is the appointment of a mixed team from the various branches or divisions most intimately concerned under a Project Officer, who is a real czar of the project and is responsible for it not to his own branch or division chief but directly to the head of the office. The members of his mixed team are in turn responsible during the life of the project for their substantive research not to their own branch chiefs but to the Project Officer.

4. The following seemed to me to be the major important areas which are either omitted or underemphasized in the program (to some extent this may be because I have had to review the program very rapidly; it may contain more on these areas than I have found).

a. One of the important things to know about the Soviet economy in wartime is its ability to recuperate from bombing. I note nothing in the project list on the capacity of Soviet industry to build specific types of industrial plants or the speed with which plants can be built or rebuilt.

b. Questions on the labor force, especially of its distribution--geographical, industrial and cross--and its productivity seem to be neglected.

There is a small Services Division project on labor productivity. Perhaps labor force and labor productivity should be included as part of every large industry and commodity study. If we had a set of labor accounts, classified by industry and geography, it would be invaluable for cross checking the consistency of many of our estimates.

c. I find nothing on the cost of living or the standard of living. They seem to me to be vitally important for both the assessment of economic war potential and for psychological warfare.

d. I see nothing on the reliability of Soviet published statistics. There is so much research on Russia in the Government, in research centers and in universities, based on Soviet published statistics that it is extremely important for us to know precisely the senses, if any, in which these statistics can be relied upon. ORR has a special responsibility to make the analysis required because no one else has both the competent personnel and access to all the classified intelligence.

e. There seems to be nothing on prices, either ruble prices or a comparison of ruble and dollar prices. Any aggregative economic analysis undertaken in ORR, such as the analysis of Russian defense budgets which we were shown and including any input-output work, is extremely dependent on ruble and dollar/ruble price data for its interpretation and significance. A good deal of ruble and dollar/ruble analysis is being conducted elsewhere, but at least one sphere of very great interest, namely, the pricing of military equipment, can only be studied in ORR which has access to all the necessary intelligence.

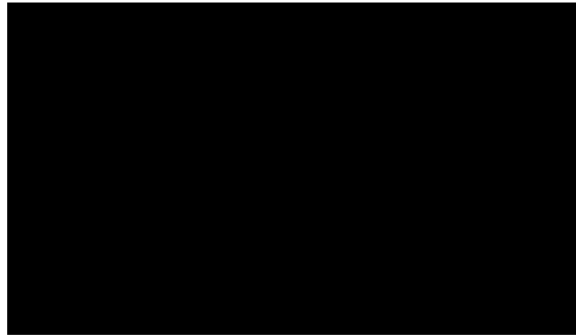
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APPENDIXES

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PANEL OF CONSULTANTS ON OPR PROGRAM

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SPECIFIC COMMENTS

1. Project 0.6 and 13.4

I like the emphasis on partial matrices and the use of physical units as a means for getting into this research area. I agree with your Working Group that input-output has some possibilities as a technique of economic analysis, but it is in its infancy. The difficulties of its application to the Russian economy are truly formidable and it could easily become a monster devouring the major share of the resources of ORR.

2. Project 25.29

This project is defined as the "breakdown point" of the Soviet economy under denial of POL. I question whether this is a meaningful concept. I expect that the appropriate question is--How can we expect the Soviet economy to adjust to POL losses of various magnitudes? I might also point out that this is an extremely difficult problem for ORR to handle without a lot of knowledge regarding other bomb damage to the Soviet economy.

3. Project 47.6

This project on standards of air fields in the eastern European satellites seems to me to be extremely valuable. Why are only 400 man-hours allocated to it and why is the project restricted to the eastern European satellites?

4. I have noted Mr. Amory's warning that the office must be prepared to answer research questions regarding a wartime mobilization in the Soviet Union. My guess is that peacetime or partial mobilization is a much more fruitful study in ORR unless a wartime mobilization analysis can be fully integrated with an analysis of damage from strategic bombing. Our strategic bombing will not permit anything approaching a full mobilization after D-Day. Pre D-Day mobilization of the economy may have very significant value as an indicator of Soviet intentions (note the cessation of investment in basic industries in 1938). At the very least, Soviet current and planned munition production in peacetime is one of the most important thing to take into account in our own military planning.

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SPECIFIC COMMENTS

My general comments have been included in the summary portion of the main Panel report and below are my specific comments.

25X6A It seems to me that the general subject of petroleum and particularly the supply of petroleum products for use in aviation and highway transportation should be given very high priority. No doubt CIA has thorough knowledge of the fuel supply problems in [REDACTED] and the effectiveness of American bombing action to decrease [REDACTED] ability to carry on. I believe this was notable in the last few months of the second World War. Therefore, it would seem wise to pay special attention to the petroleum situation from all angles. It does not seem to me to be nearly as important to study other fuels such as coal and natural gas and even wood, which is largely used in portions of USSR for power production.

In the Industrial Division, Item 36.10 - Gas Turbines could well be entirely omitted. Even in the United States, gas turbines are of no consequence unless one considers jet aircraft as having gas turbines.

Such items of electrical equipment as covered by Item 36.15 and 36.16 should have fairly high priority when considering the general power supply situation in USSR.

I believe World War experience would indicate the need for placing the general transportation problems high on the priority list. Highways, railroads and motive power must be a tremendous problem in Russia and should therefore be actively and continuously watched by ORR.

Under the general heading of "Construction," the potential ability of Russia to build new plants and especially to rebuild damaged plants should be high on the priority list.

In the Materials Division there is an item of special commodities. This probably includes atomic energy problems and surely AEC has information or should be getting it from ORR concerning not only available uranium supplies, but also the special materials, especially metals which are necessary for proper solution of production problems in atomic energy area. For instance, no mention is made of boron or of zircon. There may be other specialties known to AEC which should be investigated.

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SPECIFIC COMMENTS

In going through the standard classification of Table III, the following observations were made:

Page 37. In general the electric power industry is well covered and the division of time allocation in view of past work and coverage seems to be about right. One observation is that Project 44.5, "Electric Expansion Under the New USSR Five-Year Plan" is scheduled for the fourth quarter of 1953. It seems that this might be set up for a higher priority.

Page 45. No. 11, coal mining is covered by several general reports and by one report regarding bituminous coal under Project No. 26.1. Lignite and peat coals might be included as they are supposedly important in the Soviet economy. Or perhaps the separate 26.1 might be included in the general reports.

Page 50. Manufacture of paper and paper products might be useful as it is important in consumption of timber and power and would give some indication of how much of the timber production is going into pulp.

Page 59. Some emphasis of the general report Project 32.5 could be on industrial furnaces and ovens as giving some indication of the metallurgical industries.

Page 63. Classification 63 - construction of power facilities is covered in an overall Project Report 47.10 which includes all construction. Said report should attempt to divide the classifications of construction because the requirements of hydro plant construction for manpower and material is so much greater than steam power construction. Coordination of activities between the power and construction analysts should be maintained. There seems to be no adequate coverage of direct connected power in industrial plants. This may be steam, internal combustion or hydro power in about that order of importance.

Construction of canals and internal water improvement and harbor and port facilities which are important items in the economy of a country are not covered.

Page 65. Electric power seems to be adequately covered under Classification No. 5 and is included in general office report .6. Here is where coordination with the construction analysts will prevent some duplication.

Page 72. Nuclear weapons we note are not covered which we assume are being covered elsewhere.

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SPECIFIC COMMENTS

1. Some projects seem to overlap as between branches. The following are noted:

- 22.10 - Chemical Equipment in Soviet Bloc
- 32.8 - Oil Refining & Chemical Process Equipment
- 25.3 - Petroleum Refining Facilities in the Soviet Bloc

2. In some cases the conclusions of a given project should definitely appear as part of another project. For example, the conclusions of 22.11 "Tetraethyl Lead in the Soviet Bloc" should appear as part of 25.3 "Petroleum Refining, etc."

Another example, 32.4 "Oil Drilling Equipment" should be a part of 25.1 "Petroleum Exploration, Development and Production, etc."

This type of combination could entrance the value of some of the reports.

3. Suggest a specific project on aircraft jet fuel

- a. production
- b. performance
- c. specifications

This subject is due to increase in importance.

4. In the 33 class suggest a project on aircraft jet engine production and performance.

5. 22.14 Rubber Industry in the Soviet Bloc subheads situation in satellites but skips USSR. Maybe this was an earlier report.

6. A project on manufacture and testing of petroleum refinery instruments might be of value.

7. The substance of 25.5 "Production of Aromatic Gasoline Components, etc." should be included in 22.2 "(b) Synthetic Aromatics in the USSR."

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SPECIFIC COMMENTS

Materials Division - Non-Ferrous Metals and Minerals

Suggest adding silver deposits and production

Industrial Division - Weapons

37.1 - 100 hours seems far too little time for the important subject of guided missiles.

SPECIFIC COMMENTS

Page 7 -- 13-1 and 13-2 It seems to me that the work on Economic Capabilities of the Soviet Bloc and on the Concept of Economic Vulnerabilities should be accelerated.

Page 24 - 33-1 c This should be accelerated.

Page 25 - Note absence of metal cutting tool industry .

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SPECIFIC COMMENTS

A review of the detailed projects listed in the 1953 ORR Research Program raises the question as to whether time has been allocated to certain projects at the expense of others of more importance and also the possibility of omission. There is also the question of possible duplication in the work of certain projects.

Not mentioned as a specific project, though possibly it is covered under "Shipbuilding" is submarine production or is this an item exclusively for naval intelligence? Likewise under "Electrical Equipment," switch gear and power station controls are covered, but no reference is made to the equally important factor of transformers or to the production of silicon steels used in this construction.

23.4 Plates and Sheets - 300 hours
Tinplate - 500 hours

While the Fifth Five-Year Plan specified an 80 per cent increase in the production of tin, this may be for other purposes than the production of tinplate. Substitutes can readily be found for tinplate for packaging purposes, including foods. It, therefore, appears that a reversal of the above allocation might be justified in view of the importance of "Plates and Sheets" to such end items as ships, locomotives, trucks, electrical equipment, etc.

24.10 Lime Deposits and Processing Plants - 600 hours

37.3 Diesel Engine Production - 250 hours

The above allocations again raise the question of relative importance in view of "37.3" being tied into railroad transportation, trucks, tractors, and marine use including submarines.

With regard to possible duplication and overall time allocated the question is raised with respect to

24.12 Graphite Deposits, Suitability and Use - 500 hours
32.2 Carbon and Graphite Electrode Production - 250 hours

Total 750 hours

32.9 "Metallurgical Equipment" is allocated 2,800 hours. Not knowing the details of this project, the number of hours appears excessive in comparison with other important projects, e.g., "Oil Refining and Chemical Process Equipment" - 1,500 hours.

32.13 Analysis of Soviet Bloc Tractor Output

Is any importance attached to the mention of the use of electric tractors in the area of the large gas in the Fifth Five-Year Plan?

42.10 In the project "Future Prospects of East-West Trade" will consideration be given to prospects of trade between [redacted] and China in view of the pressure from [redacted] that such trade is essential to [redacted] economy?

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